

**WHAT IS CLAIMED IS:**

1                   2.       A method as in claim 1, wherein the method further comprises:  
2                   providing additional structures on the mold of dental features, wherein the  
3                   appliance has protrusions corresponding to the structures; and  
4                   removing the appliance from the mold utilizing the protrusions, whereby  
5                   removal is aided.

1                   3.        A method as in claim 1, wherein the method further comprises:  
2                   providing additional structures in the mold of dental features, wherein the  
3                   structures provide a guide to demarcate a portion of the appliance in a desired location;  
4                   and  
5                   altering a portion of the appliance demarcated by the structure.

1 4. A method as in claim 3, wherein the altering step comprises cutting  
2 out the portion of the appliance demarcated by the structure, whereby a window is created  
3 to expose the underlying dental feature

1 3. A method for producing a digital model, said method comprising:  
2 providing a digital model of at least one dental feature;  
3 providing a digital model of at least one attachment device; and  
4 positioning the digital model of the attachment device on the digital model  
5 of the dental feature to produce a combined computerized model.

1                         5 A method for producing a dental positioning appliance which is  
2 removably attachable to at least one dental feature to effect or enhance dental positioning,  
3 said method comprising:

4                         providing a combined digital model of at least one dental feature having at  
5 least one attachment device;

6                         producing a mold from the combined digital model, wherein the mold has  
7 the attachment device on a surface thereof;

8                         forming a dental positioning appliance over the mold; and

9                         removing the appliance from the mold, wherein the appliance has a  
10 receptacle corresponding to the attachment device and cavities corresponding to the  
11 dental features.

1                         6 A method as in claim 5, wherein the method further comprises:

2                         providing a digital model of an additional structure;

3                         positioning the digital model of the additional structure on the digital  
4 model of dental features, wherein the appliance has protrusions corresponding to the  
5 structures; and

6                         removing the appliance from the mold utilizing the protrusions, whereby  
7 removal is aided.

1                         7 A method as in claim 6, wherein the method further comprises:

2                         providing a digital model of an additional structure;

3                         positioning the digital model of the additional structure on the digital  
4 model of dental features, wherein the structures provide a guide to demarcate a portion of  
5 the appliance in a desired location; and

6                         altering a portion of the appliance demarcated by the structure.

1                         8 A method as in claim 7, wherein the altering step comprises cutting  
2 out the portion of the appliance demarcated by the structure, whereby a window is created  
3 to expose the underlying dental feature.

1                   10. A method for forming an attachment device on a dental surface,  
2    said method comprising:

3                   providing a template which is removably positionable over at least one  
4    dental feature, wherein the template has at least one receptacle having a location and  
5    shape corresponding to those of the attachment device;

6                   inserting dental material into the receptacle;

7                   positioning the template over the corresponding dental feature(s) of a  
8    patient; and

9                   polymerizing the dental material,

10                  whereby an attachment device is formed on the dental surface.

1                   11. A method as in claim 10, wherein the polymerizing step comprises  
2    bonding to the dental feature.

1                   12. A method as in claim 10, wherein the polymerizing step, comprises  
2    hardening of the dental material but not bonding the material to the dental feature.

1                   13. A method as in claim 10, wherein the template comprises a multi-  
2    tooth template which is positionable over multiple dental features so that multiple  
3    attachment devices can be formed on one or multiple dental features

1                   14. A method as in claim 10, wherein the template comprises a single-  
2    tooth template which is positionable over one dental feature so that at least one  
3    attachment device can be positioned on one dental feature.

1                   15. A method for bonding an attachment device to a dental surface,  
2    said method comprising:

3                   providing an attachment device having a bonding surface thereof;

4                   providing a template which is removably placeable over at least one dental  
5    feature,

6                   inserting the attachment device into a receptacle in the template; and

7                   positioning the template over the dental features of the patient with an  
8    adhesive between the bonding surface and the surface of the dental feature;

9                   whereby the attachment device is bonded to the surface of the dental  
10                  feature by means of the adhesive.

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1                   16. A method as in claim 15, wherein the adhesive is initially present  
2 on the bonding surface of the attachment device.

1                   17. A method as in claim 15, further comprising applying the adhesive  
2 to the dental feature.

1                   18. A method as in claim 17, wherein the adhesive is applied prior to  
2 positioning the template.

1                   19. A method for moving teeth, said method comprising:  
2                   securing an attachment device on a dental feature; and  
3                   removably positioning a first dental positioning appliance over the dental  
4 feature wherein the appliance comprises an elastic polymeric shell having a cavity which  
5 receives the dental feature and a receptacle which receives the attachment device.

1                   20. A method as in claim 19, wherein the appliance applies  
2 repositioning force to the attachment device.

1                   21. A method as in claim 19, wherein the appliance is anchored with  
2 the attachment device and applies a repositioning force to another dental feature.

1                   22. A method as in claim 19, further comprising removably positioning  
2 at least a third dental positioning appliance over the dental feature, wherein the second  
3 dental positioning appliance comprises an elastomeric shell having a cavity which  
4 receives the dental feature and a receptacle which receives the attachment device, wherein  
5 at least one of the receptacle and the cavity has a different configuration than that of the  
6 first dental positioning appliance.

1                   23. A method as in claim 22, further comprising removably positioning  
2 at least a third dental positioning appliance over the dental feature, wherein the second  
3 dental positioning appliance comprises an elastomeric shell having a cavity which  
4 receives the dental feature and a receptacle which receives the attachment device, wherein  
5 at least one of the receptacle and the cavity has a different configuration than that of the  
6 first and second dental positioning appliances.

1                   24. A method as in claim 23, wherein at least five dental positioning  
2 appliances are successively placed over the dental feature.

1                   25. A method as in claim 23, wherein at least ten dental positioning  
2 appliances are successively placed over the dental feature.

1                   26. A method as in claim 19, wherein the dental positioning appliance  
2 applies an extrusive force to the attachment device.

1                   27. A method as in claim 19, wherein the dental positioning appliance  
2 applies a rotational force to the attachment device.

1                   28. A dental attachment device comprising:  
2                   an attachment body having a base, wherein the base is mountable on a  
3 dental feature and the body is suitable for receiving a removably attachable dental  
4 appliance.

1                   29. A device as in claim 28, wherein the attachment body comprises  
2 bumps, beads, wedges, hooks, clasps, bands, brackets, buttons, snaps, springs, levers,  
3 rods, tubes, coils, indents and/or other protrusions.

1                   30. A device as in claim 29, wherein additional devices are used in  
2 conjunction with the attachment body, comprising adhesives, flexible bands and/or  
3 ligatures.

1                   31. A device as in claim 30, wherein the protrusion comprises a  
2 structure protruding perpendicularly from the surface of the dental feature, said structure  
3 having a geometry which engages a feature in the dental positioning appliance.

1                   32. A device as in claim 31, wherein the structure includes a sloping  
2 angle of less than 90 degrees from the surface of the dental feature to the opposing end of  
3 the protruding structure to aid in positioning the appliance.

1                   33. A device as in claim 28, wherein the attachment device includes at  
2 least one layer of a polymeric material having a first state where the device does not  
3 conform to the surface of a dental feature and a second state where the device conforms to  
4 the surface of a dental feature.

1                   34. A system for moving teeth, said system comprising:  
2                   a dental positioning adjustment appliance comprising an elastic polymeric  
3 shell removably placeable over at least one dental feature; and  
4                   an attachment device mountable on the dental feature,  
5                   wherein the appliance engages the attachment device when the appliance is  
6 positioned over the dental feature to assist in dental repositioning.

1                           35. A system as in claim 34, wherein the appliance and at least one  
2 attachment device are configured to provide intrusive forces on a dental feature which is  
3 free from attachment devices.

1                   36.    A system as in claim 34, wherein the appliance and the attachment  
2 device are configured to provide extrusive forces on a dental feature upon which the  
3 device is mounted.

1                           37. A system as in claim 34, wherein the appliance and the attachment  
2 device are configured to provide rotational forces on a dental feature upon which the  
3 device is mounted.